

Serial No. 09/929,106
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Ref. No. NIS.041

AMENDMENTS TO THE CLAIMS:

1. (Currently amended) A ~~load dispersion-type duplex communication system,~~ comprising:
~~a plurality of duplexed transmission devices in a load dispersion-type communication system;~~
~~wherein, each of said transmission devices is responsive to being in an allowable load state, in which its transmission load is of an amount clearly within its data storage capacity, to perform a duplex operation with another transmission device, and is further responsive to being in an overload state, in which its transmission load is of an amount that may exceed its data storage capacity, to perform a single and work-dividing operation with that other transmission device.~~
2. (Currently amended) The ~~load dispersion-type duplex communication system~~ according to Claim 1, wherein each of said transmission devices judges, for itself, whether that transmission device is in the allowable load state or in the overload state and, in response to the judging, automatically switches between the duplex operation and the single and work-dividing operation.
3. (Currently amended) The ~~load dispersion-type duplex communication system~~ according to Claim 1, wherein, whether each of said transmission devices is in the overload state or in the allowable load state is judged based on a ~~data storage capacity size of a data storage memory~~ of that transmission device.

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4. (Currently amended) The ~~load dispersion-type duplex communication system~~ according to Claim 1, wherein judging whether each of said transmission devices is in the overload state is based on an overload threshold value, and judging whether each of said transmission devices is in the allowable load state is based on an allowable load threshold value, lower than the overload threshold value.

5. (Currently amended) The ~~load dispersion-type duplex communication system~~ according to Claim 1, wherein, whether each of said transmission devices is in the overload state or in the allowable load state is judged based on an amount of change in data stored in that ~~communication transmission~~ device over a predetermined period of time.

6. (Currently amended) A load dispersion-type duplex communication system, comprising:

first and second duplexed transmission devices, each of said transmission devices being responsive to being in an allowable load state, in which its transmission load is of an amount clearly within its data storage capacity, to perform a duplex operation with another transmission device and being further responsive to being in an overload state, in which its transmission load may exceed its data storage capacity, to perform a single and work-dividing operation with the other transmission device,

wherein when said transmission devices are performing said duplex operation, data processed by said transmission devices is selected and processed by a lower-order

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transmission device on a transmission path, and

wherein when said transmission devices are performing said single and work-dividing operation, data processed by said transmission devices is multiplexed and processed by a lower-order transmission device on said transmission path.

7. (Previously presented) The load dispersion-type duplex communication system according to Claim 6, wherein:

each of said transmission devices comprises a section for judging whether that transmission device is in the overload state or in the allowable load state, and

each of said transmission devices, in accordance with a judgment by that transmission device, automatically switches between the duplex operation and the single and work-dividing operation and then provides an instruction for such switching to another transmission device of a same order on a transmission path and to another transmission device of a lower order on the transmission path.

8. (Previously presented) The load dispersion-type duplex communication system according to Claim 6, wherein, whether each of said transmission devices is in the overload state or in the allowable load state is judged based on a data storage capacity of that transmission device.

9. (Previously presented) The load dispersion-type duplex communication system according to Claim 6, wherein judging whether each of said transmission devices is in the

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overload state is based on an overload threshold value, and judging whether each of said transmission devices is in the allowable load state is based on an allowable load threshold value, lower than the overload threshold value.

10. (Previously presented) The load dispersion-type duplex communication system according to Claim 6, wherein, whether each of said transmission devices is in the overload state or in the allowable load state is judged based on an amount of change in data stored in that communication device over a predetermined period of time.

11. (Currently amended) A ~~load dispersion-type duplex~~ communication device for operation in a load dispersion-type communication system, said device comprising:

a received data selecting and multiplexing section;
a memory section for storing data fed from said received data selecting and multiplexing section;
a transmission path interfacing section for transmitting data from said memory section to a further device;
a load detecting section for comparing the amount of data stored in said memory section with a threshold amount; and
a controller responsive to the results of the comparison by said load detecting section, for controlling said received data selecting and multiplexing section, said memory section, said transmission path interface section, and said load detecting section so as to switch operation of said communication device between to duplex operation when the amount of

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data stored in said memory section is equal to or less than said threshold amount, and to switch operation of said communication device to single and work-dividing operation when the amount of data stored in said memory section exceeds said threshold amount.

12. (Currently amended) The ~~load dispersion type duplex communication system device~~ according to claim 11, wherein said controller controls said received data selecting and multiplexing section, said memory section, said transmission path interface section, and said load detecting section so as to switch operation of the communication device to the duplex operation when said load detecting section detects that the amount of data to be stored in said memory section is within the data storage capacity of said memory section, is in an overload state, and controls said received data selecting and multiplexing section, said memory section, said transmission path interface section, and said load detecting section so as to switch operation of the communication device to the single and work-dividing operation when said load detecting section detects that the amount of data to be stored in said memory section exceeds the data storage capacity of said memory section, is in an allowable load state.

13. (Canceled)

14. (Currently amended) The ~~load dispersion type duplex communication system device~~ according to Claim 12, wherein judging whether the amount of data to be stored in said memory section is in the overload state exceeds the data storage capacity of said memory section is based on an overload threshold value, and judging whether the amount of data to be

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stored in said memory section is in the allowable load state within the data storage capacity of said memory section is based on an allowable load threshold value, lower than the overload threshold value.

15. (Currently amended) The ~~load dispersion-type duplex communication system-device~~ according to Claim 12, wherein, whether the amount of data to be stored in said memory section is in the overload state or in the allowable load state exceeds the data storage capacity of said memory section or is within the data storage capacity of said memory section is judged based on an amount of change in data stored in said memory section over a predetermined period of time.

16. (Currently amended) A ~~load dispersion-type duplex communication system for operation in load dispersion-type communication, said system comprising a plurality of~~ duplexed transmission devices, each duplexed transmission device comprising a receiving section for receiving data, a memory section for storing received data, an output section for outputting data from said memory section, a load detecting section for judging the amount of data to be stored in said memory section, and a control section responsive to said load detecting section judging that the amount of data to be stored in said memory section is causing that duplexed transmission device to be in an allowable load state clearly within the data storage capacity of said memory section, to cause said transmission device to operate in a duplex operation with another transmission device, and further responsive to said load detecting section judging that the amount of data to be stored in said memory section is

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~~causing that duplexed transmission device to be in an overload state may exceed the data storage volume of said memory section, to cause said transmission device to operate in a single and work-dividing operation with the other transmission device.~~

17. (Currently amended) The ~~load dispersion-type duplex~~ communication system according to Claim 16, wherein each of said load detecting sections judges whether ~~its-the amount of data to be stored in that transmission device is in the overload state or in the allowable load state-may exceed the data storage volume of that transmission device or is clearly within the data storage capacity of that transmission device based on a data storage capacity of that transmission device.~~

18. (Currently amended) The ~~load dispersion-type duplex~~ communication system according to Claim 16, wherein each of said load detecting sections judges whether ~~its-the amount of data to be stored in that transmission device is in the overload state-may exceed the data storage capacity of that transmission device, based on an overload threshold value, and judges whether its-the amount of data to be stored in that transmission device is in the allowable load state-clearly within the data storage capacity of that transmission device, based on an allowable load threshold value, lower than the overload threshold value.~~

19. (Currently amended) The ~~load dispersion-type duplex~~ communication system according to Claim 16, wherein, each of said load detecting sections judges whether ~~its-the amount of data to be stored in that transmission device is in the overload state or in the~~

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allowable load state may exceed the data storage capacity of said memory section or is clearly within the storage capacity of said memory section based on an amount of change in data stored in its communication device over a predetermined period of time.

20. (Currently amended) A ~~load dispersion-type duplex~~ communication system, comprising:

a plurality of means for conducting duplexed transmission in a load dispersion-type communication system:

wherein, each of said means is responsive to being in an allowable load state in which its transmission load is of an amount within its data storage capacity, to perform a duplex operation with another one of said means, and is further responsive to being in an overload state in which its transmission load is of an amount exceeding its data storage capacity, to perform a single and work-dividing operation with the other one of said means.

21. (Currently amended) A communication method for use by a duplexed transmission device ~~which is in a~~ load dispersion-type duplex communication, in a communication system including a plurality of duplexed transmission devices, said method comprising:

when the transmission load of the duplexed transmission device is in an allowable load-state of an amount within the data storage capacity of the duplexed transmission device, performing a duplex operation with another duplexed transmission device; and

when the transmission load of the duplexed transmission device is in an overload-state of an amount exceeding the data storage capacity of the duplexed transmission device,

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performing a single and work-dividing operation with that other transmission device.

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RECORD OF PERSONAL INTERVIEW

The courtesy of Examiner Jeffrey Pwu in extending a personal interview to the undersigned attorney for applicant is acknowledged with appreciation. During the interview, claim 1 was considered. Examiner Pwu indicated that amendments clarifying the "allowable load state" and the "overload state" would make the claims allowable. The above amendments do this.

During the interview, Examiner Pwu also stated that the rejection under 35 U.S.C. 112, second paragraph, would be withdrawn.

Examiner Pwu further stated that this Amendment would be entered.

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